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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/825,677	04/03/2001	Ting Sun	PA1810US	3993

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EXAMINER

PHAM, TUAN

ART UNIT	PAPER NUMBER
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2643

DATE MAILED: 03/31/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/825,677

Applicant(s)

SUN ET AL.

Examiner

TUAN A PHAM

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 April 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 2.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

2. Claims 1, 4-5, and 8-10 are rejected under 35 U.S.C. 102(e) as being anticipated by Bella (U.S. Patent No. 6,144,735).

Regarding claims 1 and 9, Bella teaches a low-pass filter (see figure 6, low pass filter 370, col.8, ln.38-39) for insertion between a POTS device and a home telephone wiring network to separate certain high frequency signals on the home telephone wiring network from the POTS device (see figure 1, remote unit 110, subscriber HPF 112, subscriber LPF 114), the filter comprising:

a first coupled inductor having a pair of windings wrapped about a core (see figure 6, inductor L12, col.9, ln.24-32),

a second coupled inductor having a pair of windings wrapped about a core (see figure 6, inductor L14, col.9, ln.20-22),

a capacitive element disposed between the first and the second coupled inductors and separated from the home telephone wiring network by either the first or the second coupled inductor to prevent high frequency signals from being shorted across the capacitor regardless of whether the home telephone wiring network is coupled to the filter adjacent to the first or the second coupled inductor (see figure 6, capacitor C24, inductor L12, inductor L14, POTS, twisted pair), and

a first resistive (e.g., $R24+R25=R$) element disposed in parallel with the one of the windings of the first coupled inductor (see figure 6, R25 and R25, col.9, ln.33-41) and a second resistive element ($R22+R23=R$) disposed in parallel with the other winding of the first coupled inductor (see figure 6, R22 and R23, col.9, ln.33-41) to reduce resonance (see col.8, ln.38-43, col.9, ln.24-30)(e.g., RLC circuit reduce the resonance frequency of the low pass filter) of certain signals between the first coupled inductor and a capacitive element of the associated POTS device.

Regarding claims 4 and 8, Bella further teaches the low-pass filter wherein each winding has an inductance in the range of 3-8 mH (see figure 6, L12-35mH, L14-5mH, col.10, ln.5-26).

Regarding claim 5, Bella teaches a communications network including a DSL modem, a POTS device, and a caller ID device coupled to in-premises telephone wiring,

an low pass filter comprising (see figure 1, subscriber ADSL transceiver 116, POTS device 118, col.1, ln.60-67:

a first coupled inductor having a pair of windings wrapped about a core (see figure 6, inductor L12, col.9, ln.24-32),

a second coupled inductor having a pair of windings wrapped about a core (see figure 6, inductor L14, col.9, ln.20-22),

a capacitive element disposed between the first and the second coupled inductors and separated from the home telephone wiring network by either the first or the second coupled inductor to prevent high frequency signals from being shorted across the capacitor regardless of whether the home telephone wiring network is coupled to the filter adjacent to the first or the second coupled inductor (see figure 6, capacitor C24, inductor L12, inductor L14, POTS, twisted pair), and

a first resistive (e.g., $R24+R25=R$) element disposed in parallel with the one of the windings of the first coupled inductor (see figure 6, R25 and R25, col.9, ln.33-41) and a second resistive element ($R22+R23=R$) disposed in parallel with the other winding of the first coupled inductor (see figure 6, R22 and R23, col.9, ln.33-41) the first and second resistive elements preventing resonance of certain signals (see col.8, ln.38-43, col.9, ln.24-30)(e.g., RLC circuit reduce the resonance frequency of the low pass filter) between the first coupled inductor and capacitive elements of the associated POTS device from interfering with operation of the caller ID device (see col.1, ln.60-67).

Regarding claim 10, Bella further teaches the low-pass filter wherein the first pair of inductor windings are both wrapped about a first inductor core and the second

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pair of inductor windings are both wrapped about a second inductor core (see figure 6, L12, L14, col.9, ln.20-30).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 2-3, 6-7, and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bella (U.S. Patent No. 6,144,735).

Regarding claims 2 and 6, Bella further teaches a low-pass filter (see figure 6, low pass filter 370, col.8, ln.38-39) for insertion between a POTS device and a home telephone wiring network to separate certain high frequency signals on the home

telephone wiring network from the POTS device (see figure 1, remote unit 110, subscriber HPF 112, subscriber LPF 114), the filter comprising:

a first coupled inductor having a pair of windings wrapped about a core (see figure 6, inductor L12, col.9, ln.24-32),

a second coupled inductor having a pair of windings wrapped about a core (see figure 6, inductor L14, col.9, ln.20-22),

a capacitive element disposed between the first and the second coupled inductors and separated from the home telephone wiring network by either the first or the second coupled inductor to prevent high frequency signals from being shorted across the capacitor regardless of whether the home telephone wiring network is coupled to the filter adjacent to the first or the second coupled inductor (see figure 6, capacitor C24, inductor L12, inductor L14, POTS, twisted pair), and

a first resistive (e.g., $R_{24}+R_{25}=R$) element disposed in parallel with the one of the windings of the first coupled inductor (see figure 6, R25 and R25, col.9, ln.33-41) and a second resistive element ($R_{22}+R_{23}=R$) disposed in parallel with the other winding of the first coupled inductor (see figure 6, R22 and R23, col.9, ln.33-41) to reduce resonance (see col.8, ln.38-43, col.9, ln.24-30)(e.g., RLC circuit reduce the resonance frequency of the low pass filter) of certain signals between the first coupled inductor and a capacitive element of the associated POTS device.

It should be noticed that Bella fails to clearly teach the capacitive element having the values in the range of 22-68 nF. However, Bella teaches the capacitive element C24 having the value of 12nF, by changing the value of the capacitive element C24 to

the range as claimed would not involve any inventive feature since it is just a matter of selecting the value of the capacitive element for a purpose of changing the value of the filter's characteristic of the particular frequency band.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the filter of Bella by changing the value of the capacitive element to the range of 22-68nF in order to meet the filtering characteristic of the particular frequency band.

Regarding claims 3, 7, and 11, Bella further teaches a low-pass filter (see figure 6, low pass filter 370, col.8, ln.38-39) for insertion between a POTS device and a home telephone wiring network to separate certain high frequency signals on the home telephone wiring network from the POTS device (see figure 1, remote unit 110, subscriber HPF 112, subscriber LPF 114), the filter comprising:

a first coupled inductor having a pair of windings wrapped about a core (see figure 6, inductor L12, col.9, ln.24-32),

a second coupled inductor having a pair of windings wrapped about a core (see figure 6, inductor L14, col.9, ln.20-22),

a capacitive element disposed between the first and the second coupled inductors and separated from the home telephone wiring network by either the first or the second coupled inductor to prevent high frequency signals from being shorted across the capacitor regardless of whether the home telephone wiring network is coupled to the filter adjacent to the first or the second coupled inductor (see figure 6, capacitor C24, inductor L12, inductor L14, POTS, twisted pair), and

a first resistive (e.g., $R_{24}+R_{25}=R$) element disposed in parallel with the one of the windings of the first coupled inductor (see figure 6, R_{25} and R_{25} , col.9, ln.33-41) and a second resistive element ($R_{22}+R_{23}=R$) disposed in parallel with the other winding of the first coupled inductor (see figure 6, R_{22} and R_{23} , col.9, ln.33-41) to reduce resonance (see col.8, ln.38-43, col.9, ln.24-30)(e.g., RLC circuit reduce the resonance frequency of the low pass filter) of certain signals between the first coupled inductor and a capacitive element of the associated POTS device.

It should be noticed that Bella fails to clearly teach the first and second resistive element having the values in the range of 500-5000ohms. However, Bella teaches the first resistive element ($R_{24}+R_{25}=R_1$) R_1 having the value of 85ohms and the second resistive element ($R_{22}+R_{23}=R_2$) R_2 having the value of 85ohms, by changing the value of the first and second resistive element R_1 , R_2 to the range as claimed would not involve any inventive feature since it is just a matter of selecting the value of the resistive element for a purpose of changing the value of the filter's characteristic of the particular frequency band.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the filter of Bella by changing the value of the first and second resistive element to the range of 500-5000ohms in order to meet the filter's characteristic of the particular frequency band.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. In order to expedite the prosecution of this application, the applicants are also requested to consider the following references. Although Scholtz et al. (U.S. Patent No. 6,301,337), Beeman (U.S. Patent No. 6,144,734), Bingel (U.S. Patent No. 5,848,150), and Van Wonterghem (U.S. Patent No. 6,628,783) are not applied into this Office Action; they are also called to Applicants attention. They may be used in future Office Action(s). These references are also concerned for supporting the low pass filter for providing data and voice services on the telephone line at the customer premises.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Tuan A. Pham** whose telephone number is (703) 305-4987. The examiner can normally be reached on Monday through Friday, 8:00 AM-5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Curtis Kuntz can be reached on (703) 305-4708 and

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(703) 872-9306

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington VA, Sixth Floor (Receptionist, tel. No. 703-305-4700).


Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have question on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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March 25, 2004

Examiner

Tuan Pham


CURTIS KUNTZ
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